DOCUMENT RESUME

ED 415 759 HE 030 904

AUTHOR Harms, Joan Y.
TITLE Measuring Student Involvement, Gain and Satisfaction Using Cohorts at Different Points in Time.
PUB DATE 1997-05-18
NOTE 25p.; Paper presented at the Annual Forum of the Association for Institutional Research (37th, Orlando, FL, May 18-21, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *College Environment; Education Work Relationship; Higher Education; Institutional Research; *Learning Experience; Student Attitudes; *Student College Relationship; Student Experience; *Student Participation; Trend Analysis; *Undergraduate Students
IDENTIFIERS *College Student Experiences Questionnaire; *University of Hawaii Manoa

ABSTRACT

Research conducted at the University of Hawaii at Manoa (UHM) provided comparisons for 1990, 1993, and 1996 of undergraduate students' satisfaction and participation at college. The survey instrument used was the College Student Experiences Questionnaire, which included measures of the amount of progress perceived by students in 23 different academic and social/personal areas. The overall satisfaction of students with their educational experiences at UHM increased slightly from 1990 to 1993, but decreased from 1993 to 1996. Respondents also rated the emphasis given by UHM to the following aspects of their college environment: academic, aesthetic, analytical, vocational, and course relevancy. While there was little change in student involvement in academic, personal/social, student union, and campus residence activities over the period studied, declines were found in student involvement in library activities, art activities, use of athletic and recreational facilities, and clubs and organizations. While students reported an upward trend in their familiarity with computers, a downward trend was reported in vocational competence, mainly in gaining career information, specializing for further education, and acquiring training for a specific job or field. No significant differences were found in student ratings of their college relationships with other students, faculty, and administrators. Seven data tables are appended. (Contains 12 references.) (SW)

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Measuring Student Involvement, Gain and Satisfaction Using Cohorts at Different Points in Time

Joan Y. Harms, Ph.D.
Institutional Analyst
University of Hawai'i at Mānoa

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Association for Institutional Research 37th Annual Forum
Orlando, Florida
May 18-21, 1997

HE 030 904

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Introduction

Many colleges and universities have in recent years experienced financial cutbacks and related constraints. Decreased budgets accompanied by reduction in courses, services and facilities have intensified concern over the quality of education.

Pace (1984) indicates that the "quality of education can be improved by three critical conditions: student involvement, high expectations, and assessment and feedback." Two things influence how students perceive the amount of gain or progress made toward achieving their educational goal: 1) the quality of effort or involvement they invest in using educational facilities and 2) the opportunities the campus provides for their learning and development (Pace, 1990).

A substantial body of research in higher education indicates that various forms of student interaction with their environment can have significant impact on learning and development (Astin, 1977, 1985; Pascarella and Terenzini, 1991; Tinto, 1987). One widely used instrument for measuring student perception of college involvement, satisfaction and gain is the College Student Experiences Questionnaire (CSEQ) (Pace, 1984, 1987). Numerous studies have been conducted by institutions using the CSEQ both at four-year and more recently at two-year institutions Research outcomes based on the CSEQ are regularly reported in higher education journals and at professional conferences (e.g., Balik, 1995; Douzenis and Murrell, 1992; and Preston, 1993). Using the CSEQ, Nutter, Kroeger and Kinnick (1991) examine the impact of involvement on adult learners, and Bauer (1995) investigates the quality of effort and gain in academic and personal/social development of students measured during their freshman and senior years. Information on the CSEQ and examples of users can be found on the CSEQ web site [www.indiana.edu/~cseq].

Purpose

The purpose of this paper is twofold: First, to familiarize administrators, decision-makers, institutional researchers and other professionals at four-year institutions with the use of the College Student Experiences Questionnaire (CSEQ) as a tool for analyzing the effects of the college environment on student academic and personal/social development. Second, to report the results of a cross-sectional study conducted at the University of Hawai'i at Mānoa (UHM) which compares undergraduate student involvement in campus life, in gain in performance, and in satisfaction with college experiences in 1990, 1993 and 1996.

Three research questions are addressed:

- What are the academic and social/personal differences or change in student involvement over 1990, 1993, and 1996?
- Has student satisfaction with their college experiences changed over this period?
- What are the areas of self-reported gain in performance over these three data points?

The findings should assist UHM decision makers understand the degree of academic and developmental progress made over the years and the areas that need further attention.

Instrument

The College Student Experiences Questionnaire is a nationally standardized survey instrument developed at the Center for the Study of Evaluation at UCLA by C. Robert Pace (1984, 1990). The CSEQ has recently moved from UCLA to the Center for Postsecondary Research and Planning at Indiana University. The eight-page comprehensive survey contains 197 quantitative items designed to measure the quality of undergraduate education. Additionally ten institutionally designed items can be added to the survey. Since 1979, the CSEQ has been used by over 400 institutions, and it demonstrates high reliability and validity (Pace, 1987).

The CSEQ measures 1) student characteristics, 2) the quality of effort expended by students as they interact with their environment in the following areas: faculty, library, course learning, writing, science, arts, personal experiences, student acquaintances, topic of conversation, information in conversation, student union, athletic and recreational facilities, clubs and organizations and campus residence, 3) college experiences (satisfaction with college, emphases in college and relationships) and 4) self-reported gain in performance in 23 academic and social/personal areas.

Methodology

The subjects in this cross-sectional study were three independent groups of classified undergraduate students at the University of Hawai'i at Mānoa who were administered the CSEQ in the spring semesters of 1990, 1993 and 1996. The 1990 sample of 1,368 respondents was selected from a cross-section of classes in nine colleges at the university. The 1993 and 1996 samples of 2,500 and 2,404 respondents respectively were selected through a random sample stratified by class level. Surveys were mailed to them with one follow-up postcard reminder for the 1993 group and two postcard reminders for the 1996 group. The return rate for the 1993 group was 1,124 or 45 percent and for the 1996 group 1,022 or 43 percent. The 1990, 1993 and 1996 groups were generally representative of their classified undergraduate population in class and ethnicity while in all cases females were overrepresented by 5-7 percent.

One-way analysis of variance (ANOVA) was applied to the CSEQ results to identify any significant differences between any two means of the three groups. In instances where there were significant differences at an alpha level of .01, Tukey's honestly significant difference (HSD) test was applied to determine which two or if all three means differed from each other. Of special interest were significant differences in means that demonstrated an upward or downward trend over three pairs of data points. The Statistical Package for the Social Sciences (SPSS) was used to analyze the results.

Student Characteristics

Table 1 presents the background characteristics of 1990, 1993 and 1996 respondents. Chi-square tests at a .01 level of significance reveal that the 1990, 1993 and 1996 cohorts were similar in age, gender, marital status and class.

The 1993 and 1996 cohorts differed from the 1990 cohort in the following manner. The 1993 and 1996 cohorts were composed of a larger percentage of transfer students, part-time students and students who lived at home rather than in college housing. There was a larger percentage of Asian/Pacific students. Although the percentage of students who worked decreased from 1990 to 1996, the percentage who did work in 1993 and 1996 remained about the same. The percentage who wanted an advanced degree increased from 1990 to 1996 although the percentage decreased from 1993 to 1996.

Finally, the 1993 and 1996 cohorts were similar to each other on nearly all student characteristics and appear to be more similar to each other than to the 1990 cohort. These differences in cohort groups appear to be reflected, in part, in the general population of students. For example, the 1993 and 1996 population also differed from the 1990 population in that they were composed of a larger proportion of transfer students as well as students who did not live in college living facilities.

[Place Table 1 here]

Results

Quality of Effort

Quality of effort is defined as involvement in this report and is measured by how frequently students performed particular activities during the current school year. For example, in Table 2 regarding experiences with faculty, quality of effort is defined as how frequently students "talked with a faculty member" as measured on a four-point scale of 1 = Never, 2 = Occasionally, 3 = Often and 4 = Very Often.

[Place Table 2 here]

Table 3 lists quality of effort scale scores for academic experiences, personal/social experiences and experiences in group facilities and organizations. There are 14 major scale scores representing the following: faculty, library, course learning, writing, science, arts, personal, student acquaintances, topic of conversation, information in conversation, student union, athletic and recreational facilities, clubs and organizations and campus residence.

[Place Table 3 here]

Each quality of effort scale represents responses to a set of highly correlated questions pertaining to activities related to that scale. For example in Table 3 the mean scale score of 18.8 in 1990 for faculty experiences is based on responses to ten items relating to various kinds of student-faculty interactions. See Table 2 for a list of the ten items. The

content of these ten items range from those tasks requiring routine involvement to those representing a higher quality of involvement or effort. For example, "talking with a faculty member" which is #1 on the list requires only routine effort or involvement by the student, whereas "discussing personal problems or concerns with a faculty member" which is #10 on the list requires a higher level or quality of effort by a student.

A respondent must have responded to all ten items to be placed on the scale. The mean scale scores are calculated by assigning a value of 1 to 4 to the response on each of the items and adding them up. The ten items will have a range from 10 to 40. The mean of these scores for all respondents will be the quality of effort mean score for that activity; the higher the mean the higher the quality of effort.

Academic Experiences

Table 3 indicates that student involvement in academic activities involving faculty, course learning, writing and science dropped from 1990 to 1996, but the decrease was not significant. Student use of the library, however, declined significantly after 1990, with the 1993 and 1996 cohorts utilizing the library facilities less than the 1990 cohorts.

The difference in library mean scale scores from 1990 to 1996 may be attributed to a number of factors. Space limitations at Hamilton Library, the graduate research library of UHM, have concerned the University for years and may have impacted the ease and access of students to library collections and the reading and study areas in the library. Further, information technology may have changed the ways students interact with library staff and facilities, thus making it less necessary for students to be physically present at the library.

Personal and Social Experiences

Student quality of effort and involvement in personal interactions, student interactions, topics students use in conversation, and information student use in conversations did not significantly change from 1990 to 1996.

The greatest change occurred in the arts (art, music and theater) with a steady decline from 1990 to 1996. Most of this direction may be attributed to less student involvement in art activities with significant declines from 1990 to 1993 and 1990 to 1996.

Group Facilities and Organizations

Student quality of effort and involvement declined in student union activities and campus residence hall activities from 1990 to 1996, but the difference was not significant. Student use of athletic and recreational facilities and participation in clubs and organizations, however, declined significantly from 1990 to 1993 and from 1990 to 1996 with no significant differences between 1993 and 1996 cohorts.

The decline in certain activities involving athletic and recreational facilities may be attributed to the decline in the number of students who live on-campus in university residence facilities. These students have more and easier access to these facilities. The decline of involvement in activities involving clubs and organizations may also be attributed to the decline in students living on-campus. An increase in the population of older and part-time students may also be impacting participation since these students spend less time on campus, in part, due to job and other responsibilities.

Quality of Effort Findings

- Overall, there has been little change in the involvement of students in their academic, personal/social, student union and campus residence activities over the years 1990, 1993 and 1996.

- Declines in student involvement, however, have been noted in library activities, art activities, use of athletic and recreational facilities and clubs and organizations. In these areas, there appears to be significant differences between the 1990 cohort and the two other cohorts, with no significant differences between the 1993 and 1996 cohorts.

Ratings of the College Experiences

UH-Mānoa undergraduates rated their college experiences in respect to:

- satisfaction with their college experiences
- the emphasis the University placed on the following experiences:
  - academic
  - aesthetic
  - analytical
  - vocational
  - relevance of courses
- relationships with other students, faculty and administrators

Student Satisfaction

The overall satisfaction of respondents with their educational experiences at UHM increased slightly from 1990 to 1993 but decreased from 1993 to 1996. Satisfaction was measured by two questions, one asking respondents whether or not they would attend UHM again and the other whether they liked UHM.

When asked "If you could start over again, would you go to the same college you are now attending?" 72 percent of the 1990 cohort and 75 percent of the 1993 cohort responded with "probably yes" and "yes" on a four-point scale and only 67 percent of the 1996 cohort responded the same. Figure 1 shows the trend over 1990, 1993 and 1996.

[Place Figure 1 here]

When respondents were asked "How well do you like college?" 73 percent of the 1990 cohort and 74 percent of the 1993 cohort responded with "I like it or I am enthusiastic" on a four-point scale and only 68 percent of the 1996 responded the same. Figure 2 shows the trend over the three data points.

[Place Figure 2 here]

Another way of analyzing student satisfaction is to calculate a mean scale score for the above two survey items. The mean scale score was derived by assigning values of 1 to 4 to the responses to the two items and then combining them to produce a scale score ranging from 2 to 8. The mean satisfaction scale score increased slightly from 5.7 to 5.8

from 1990 to 1993 and decreased to 5.6 in 1996. The mean differences were significant at the .05 level between 1990 and 1996 and 1993 and 1996. Much of the dissatisfaction may be attributed to student concerns over the condition of the libraries, financial aid reductions, tuition increases and the perceived quality of their education due to University budget cuts, especially during the 1995-1996 academic year. With the weaker economy, students may also have more career and vocational concerns than they would during stronger economic times.

College Environment

Respondents were asked to rate the emphasis UHM gave to the following aspects of their college environment: academic, aesthetic, analytical, vocational and relevancy of courses. The rating scale ranged from 1 = weak emphasis to 7= strong emphasis.

Academic emphasis was defined as emphasis placed on the development of academic, scholarly and intellectual qualities; **aesthetic emphasis** was defined as emphasis placed on the development of aesthetic, expressive and creative qualities; **analytical emphasis** was defined as emphasis on being critical, evaluative and analytical; **vocational emphasis** was defined as emphasis of the development of vocational and occupational competence; and **relevance of course emphasis** was defined as emphasis placed on the personal relevance and practical values of courses taken by respondents.

Table 4 indicates that there were no significant differences in respondents' ratings of the emphasis UHM gave to aesthetic, analytical and relevance of courses in the college environment between 1990, 1993 and 1996.

[Place Table 4 here]

There were, however, significant downward trends in academic and vocational emphases, especially between 1993 and 1996. In the academic area, there was a significant difference between the 1993 and 1996 cohorts with mean scores declining from 4.8 to 4.6. In the vocational area, there were significant differences between the 1990 and 1996 cohorts and the 1993 and 1996 cohorts with mean scores declining from 4.5 to 4.2 and 4.4 to 4.2 accordingly.

Rating of College Relationships

Table 5 indicates that there were no significant differences on how 1990, 1993 and 1996 cohorts rated their college relationships with other students, faculty and administrators.

[Place Table 5 here]

The three cohorts rated their relationships with other students, student groups and activities "above average" or about 5.1 on a seven-point scale of 1 = competitive, uninvolved and sense of alienation and 7 = friendly, supportive and sense of belonging.

Relationships with faculty were also rated "above average" or 4.8 on a seven-point scale of 1 = remote, discouraging and unsympathetic to 7 = approachable, helpful and encouraging.

Relationships with administrative personnel and offices were rated "average" or about 3.9 on a seven-point scale of 1 = rigid, impersonal and bound by regulation to 7 = helpful, considerate and flexible.

College Experiences Findings

- Student satisfaction with their educational experiences at UHM increased to 75 percent from 1990 to 1993 and dropped to 67 percent in 1996. Much of the dissatisfaction may be attributed to student concerns over financial aid reductions, tuition increases and the perceived quality of their education due to University budget cuts during the 1995-1996 academic year.

- Students reported a decrease in university emphasis on the development of academic, scholarly and intellectual qualities in 1996 than in earlier years. They also reported a steady decline in the emphasis the University placed on vocational development. This decline is confirmed in the next section of this report where students report a steady decline in perceived gains in vocational competence in the areas of career information, specialization and vocational training.

- There was no change in student relationships with other students, faculty and administrators over 1990, 1993 and 1996. Ratings of student-student relationships were the highest, followed by above average ratings of student-faculty and average ratings of student-administrators relationships.

Estimate of Gain in Performance

The CSEQ also measures the amount of gain or progress perceived by students in 23 different academic and social/personal areas, such as writing, history, literature, ethics, self-understanding and careers. Respondents were asked the following question: "In thinking over your experiences in college up to now, to what extent do you feel you have gained or made progress in each of the following respects?" They were also asked to complete a four-point rating scale measuring the amount of gain from 1 = Very Little, 2 = Some, 3 = Quite a Bit and 4 = Very Much.

Table 6 presents the mean results of the 1990, 1993 and 1996 groups. The 1996 results are ranked from a high of 2.8 for gain in understanding yourself to a low of 2.0 for gain in literature.

[Place Table 6 here]

There were a few significant changes between 1990, 1993 and 1996 for the 23 areas measured. One upward trend was noted in student gain in familiarity with use of computers from a mean of 2.4 in 1990, 2.5 in 1993 and 2.6 in 1996.

Downward trends were noted in three career/vocational areas:

- **career information** - gaining a range of information that may be relevant to a career,
- **specialization for further education** - gaining background and specialization for further education in some professional, scientific or scholarly field and
- **vocational training** - acquiring knowledge and skills applicable to a specific job or type of work.

Table 7 presents the gain in performance data in a different format. Instead of mean scores, these data are presented in rank order according to the percentages of 1996 respondents who answered "quite a bit" and 'very much" on the four-point scale described above. The areas of computers, career information, specialization for further education and vocational training are shaded on Table 7 with score differences between cohorts of 6 to 12 percentage points. In Table 6 and Table 7 the trend is upward for computers and downward for career information, specialization for further education and vocational training.

[Place Table 7 here]

Of strategic interest to UHM is the upward trend in:

- becoming aware of different philosophies, cultures and ways of life

and downward trends in two areas:

- understanding other people and the ability to get along with different kinds of people and
- knowledge about other parts of the world and other people - Asia, Africa, South America, etc.

Gain in Performance Findings

- There was little change in gain in performance over the years in the 23 academic and support areas measured.

- UH-Mānoa undergraduates report an upward trend in their familiarity with the use of computers.

- They report less gain and a downward trend, however, in their vocational competence, mainly in career information, specialization for further education and vocational training.

Summary and Implications

Summary of Findings

University of Hawai'I at Mānoa undergraduates were surveyed in 1990, 1993 and 1996 on their involvement in academic and social/personal activities, their satisfaction with college, and their gain in performance. This study reports on the changes in the responses of UH-Mānoa undergraduates over 1990, 1993 and 1996.

Self-reported student involvement in academic and support activities:

- There has been little change in the involvement of undergraduates at UHM in their academic, personal/social, student union and campus residence activities over the years 1990, 1993 and 1996.

- Significant declines in student involvement, however, have been noted in library activities, art activities, use of athletic and recreational facilities and involvement in clubs and organizations.

Ratings of the College Experience:

- Student satisfaction with their educational experiences at UHM increased to 75 percent from 1990 to 1993 and dropped to 67 percent in 1996. Much of the dissatisfaction may be attributed to student concerns over the condition of the libraries, financial aid reductions, tuition increases and the perceived quality of their education due to University budget cuts, especially during the 1995-1996 academic year. With the weaker economy, students may also have more career and vocational concerns than they would during stronger economic times.

- Students reported a significant decrease in the University's emphasis on the development of academic, scholarly and intellectual qualities over the years. They also reported a steady and significant decline in the emphasis the University placed on vocational development.

- There was no change in how they rated their relationships with other students, faculty and administrators. Student-student relationships were rated the highest followed by above average ratings of their relationships with faculty and average ratings of their relationship with administrators.

Gain in Performance:

- There was little change in self-reported gain in performance over the years in the 23 academic and support areas measured.

- The most note worthy change was a significant upward trend in student familiarity with the use of computers.

- Significant downward trends were noted in student self-perceptions of their vocational competence, mainly in career information obtained by students, specialization for further education and vocational training.

Implications

Student satisfaction with college experiences increased from 1990 to 1993 but decreased between 1993 and 1996. A number of factors may have contributed to that decrease. During the spring 1996 semester, when the CSEQ was being administered, students were faced with sudden and large tuition increases, decreases in tuition waivers and other sources of financial aid, concerns about graduating in a timely manner and concerns about University budget decreases affecting the quality of their education. The events that occurred during that spring 1996 period, in part, influenced how students responded to the CSEQ and made more salient their concerns. The University is now addressing many of these concerns.

Additionally, this study measures student perceptions of their environment over an extended period of time covering three data points in 1990, 1993 and 1996. Trend data, therefore, can assist in identifying gradual changes over time in student perceptions of their educational environment. Also trend data, supplemented by other institutional data, can provide insights on and areas of needed improvement. Overall, the learning environment appears to be very stable with only a few but significant upward or downward trends. Change in areas of importance is slow in the educational environment and will probably continue to be so without systematic and significant institutional attention and support to a targeted area.

This study has a number of limitations that should be considered when utilizing results, i.e. an overrepresentation of female respondents and the need for further control of initial variables. Although the percentage increase of females was fairly consistent for each of the three groups the overrepresentation of female respondents can be controlled by statistically weighing and analyzing the results. Steps can also be taken to statistically control some of the initial characteristics of respondents. Despite these limitations the

study has implications to offer decision makers, researchers, faculty and others interested in policy analysis, program development and improvement.

Some of the implications of the results of the CSEQ follow:

- Of 23 academic and support areas, UHM students have reported a significant gain in performance over time in only one area: their familiarity with the use of computers. The 1996 CSEQ indicated that three-fourths of classified UHM undergraduates had access to a computer at home. This is an area that across the study period has received significant institutional strategic support, and will very likely remain strong if institutional commitments are sustained or increased.

- UHM students perceive a decrease in emphasis by the University on the development of both academic and vocational qualities in the college environment. Their vocational concerns are cross-validated by the downward trend in gain in performance in career and vocational areas, such as obtaining career information and acquiring knowledge applicable to a particular job. Results of the 1996 CSEQ indicated that 41 percent of UHM undergraduates wait until their senior year or after graduation to seek career and occupational advice even though a survey of UHM freshmen indicates that obtaining a job is a major college objective of incoming students. The tendency to delay seeking out substantive information and advice on postgraduate career, occupational and graduate plans is even more evident in older students where 61 percent of classified students 25 years old and older wait until their senior year (39 percent) or after graduation (22 percent) to seek career and graduate school information.

  Undergraduates need to be encouraged from their freshmen year or early on to plan and act on academic and student support opportunities that will enhance their career knowledge, options and experiences. Equally, academic and support programs need to review the effectiveness of their services, facilitate the integration of career and job information into programs and courses, further develop internships and cooperative education opportunities and encourage co-curricular and community services activities related to course learning and career building.

- Further, the 1996 CSEQ indicates that 71 percent of UHM classified undergraduates work while attending the University. Of students who work, only 36 percent are employed in areas related to their major field or career. With respect to classified students 25 years old and older, 73 percent of them work. Of adults who work, about half or 52 percent are employed in career-related areas. Because the great majority of undergraduates work and will probably continue to do so, at least in part, because of the increasing cost of education, the University should encourage more students to

seek and secure employment in areas of their academic interest or future profession. The University should also formally promote and reinforce learning and career direction in on-campus jobs in both work-study and university funded positions.

- The University is experiencing a gradual shift in the nature of its undergraduate student body. The number of classified students 25 years old and older increased from 17 percent in 1990 to 20 percent in 1996. The number of part-time students rose from 17 to 18 percent during that same period. At the same time the number of students living in university residences decreased from 27 percent in 1990 to 23 percent in 1996. Older students typically spend less time on campus because of job and other responsibilities. Commuting students, including older students, also typically spend less time on campus than students who live on-campus. The increase in percentage of older students and commuting students may have led to a decrease in the use of campus facilities, such as recreational facilities, student involvement in clubs and organizations and cultural and artistic activities. The University needs to consider how best to serve a growing population of students who are spending increasingly less time on-campus but are still engaged in achieving their educational goals.

  There is also a continued need to study the impact of the campus environment on student outcomes as more students engage in learning experiences that draw them off-campus, such as internships, cooperative education opportunities and community service activities, or engage them technologically in electronic libraries, distance learning and related telecommunication activities.

In conclusion, the CSEQ can be a useful tool for analyzing the effects of the college environment on student change in academic and personal/social development. Results from the CSEQ can be used by academic and student affairs decision makers and researchers for assessment, policy development, problem solving, and accreditation. In general, use of the CSEQ can facilitate the understanding of and improvement in the educational experiences of college students.

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Table 1
Student Characteristics for 1990, 1993 and 1996

Item	1990 %	1993 %	1996 %
Age			
22 or younger	66	64	63
23 to 27	25	25	26
28 or older	9	11	12
Gender			
Male	39	38	36
Female	61	62	64
Ethnicity			
American Indian & Black	1	1	<1
Asian-Pacific Islander	71	74	78
Hispanic-Latin	1	1	2
White	17	17	13
Other	10	8	7
Marital Status			
Single	92	92	91
Married	8	8	9
Class			
Freshman	16	16	16
Sophomore	17	17	16
Junior	28	29	26
Senior	40	38	42
Transfer Status			
Entered here	67	63	59
Transferred	33	37	41
Full-time or part-time			
Full-time	93	89	87
Part-time	7	11	13
Most grades at UHM up to now			
A	11	15	15
A-, B+	27	28	27
B	35	30	29
B-, C+	23	22	22
C, C-, or lower	4	7	8
College expenses provided by parents and family			
All or nearly all	41	42	42
More than half	16	13	13
Less than half	11	10	9
None or very little	32	36	37

Table 1 (Continued)
Student Characteristics for 1990, 1993 and 1996

Item	1990 %	1993 %	1996 %
Lived in college housing			
Yes	40	34	32
No	60	66	68
Residence during school year			
Dormitory/other college housing	30	23	21
Fraternity or sorority house	0	0	0
Private housing near college	5	7	6
Housing away from campus	20	23	24
With parents or relatives	44	47	49
Major field of study			
Arts	2	6	6
Biological Sciences	3	6	6
Business	20	20	19
Computer Science	1	2	3
Education	10	12	12
Engineering	8	8	6
Health Related	13	11	10
Humanities	4	3	4
Physical Sciences	2	3	3
Social Sciences	10	12	13
Foreign Languages	1	2	2
Area & Interdepart Studies	1	2	3
Other	21	11	9
Undecided	4	4	5
Parents graduated from college			
No	51	49	47
Yes, both parents	26	25	27
Yes, father only	13	14	15
Yes, mother only	11	13	12
Want advanced degree			
Yes	68	76	73
No	32	24	27
Time spent per week in class and studying			
Less than 20 hours	13	12	13
20 hours	20	23	23
30 hours	32	35	34
40 hours	20	20	19
50 hours	14	10	11
Hours worked per week			
None	20	24	26
Less than 11 hours	17	16	14
15 hours	21	22	18
20 hours	26	23	23
30 hours	10	9	10
More than 30 hours	7	7	8

Table 2
Faculty Experiences
1990, 1993 and 1996

Activity	Never	Occa-sionally	Often	Very Often	Often & Very Often	No. of Cases	Year
1. Talked with a faculty member.	5	48	30	17	48	1365	1990
	5	51	26	18	44	1122	1993
	5	50	28	17	45	1005	1996
2. Asked your instructor for information related to a course you were taking (grades, make-up work, assignments, etc.).	5	50	31	14	45	1362	1990
	7	47	30	16	46	1107	1993
	7	47	31	15	46	1003	1996
3. Visited informally and briefly with an instructor after class.	17	57	18	8	26	1365	1990
	20	53	19	9	28	1121	1993
	19	55	19	7	27	1010	1996
4. Made an appointment to meet with a faculty member in his/her office.	23	57	15	5	20	1366	1990
	29	52	14	5	19	1122	1993
	30	53	13	4	18	1008	1996
5. Discussed ideas for a term paper or other class project with a faculty member.	22	53	20	5	25	1367	1990
	27	51	16	6	22	1119	1993
	27	53	15	5	20	1004	1996
6. Discussed your career plans and ambitions with a faculty member.	45	42	10	3	13	1365	1990
	46	42	9	4	13	1120	1993
	46	42	9	4	13	1005	1996
7. Asked your instructor for comments and criticisms about your work.	33	45	15	7	22	1363	1990
	38	43	14	5	19	1122	1993
	38	42	14	5	20	1007	1996
8. Had coffee, cokes, or snacks with a faculty member.	76	20	4	1	5	1367	1990
	81	15	3	1	4	1122	1993
	84	13	2	1	3	1009	1996
9. Worked with a faculty member on a research project.	88	9	2	1	3	1367	1990
	87	9	2	2	4	1120	1993
	87	10	2	2	3	1008	1996
10. Discussed personal problems or concerns with a faculty member.	74	21	3	1	4	1367	1990
	77	19	3	2	4	1122	1993
	78	19	2	1	4	1009	1996

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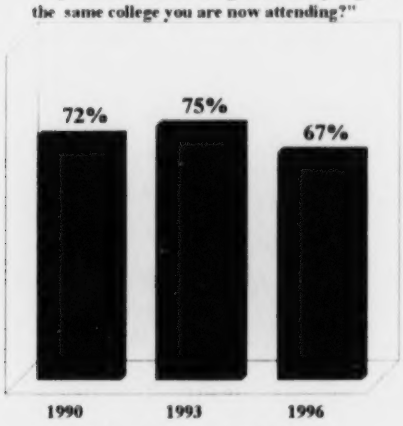
Table 3
Quality of Effort Scales
Mean Comparisons of 1990, 1993 and 1996 Undergraduates

Scale (Number of Items)	1990		1993		1996		Significance @ .05 level		
	Mean	SD	Mean	SD	Mean	SD	90-96	90-93	93-96
Academic Experiences									
Faculty (10)	18.8	5.2	18.6	5.4	18.4	5.1			
Library (10)	20.0	5.0	19.3	5.1	19.1	5.4	*	*	
Course Learning (10)	26.6	5.4	26.9	5.6	26.9	5.7			
Writing (10)	24.9	5.9	24.3	6.1	24.4	6.1			
Science (10)	18.3	6.3	18.4	6.6	18.3	6.6			
Personal and Social Experiences									
Art, Music, Theater (12)	18.6	5.6	18.1	5.5	17.8	5.3	*		
Art	6.6	2.7	6.2	2.7	6.1	2.6	*	*	
Music	6.3	2.2	6.3	2.3	6.3	2.3			
Theater	5.6	2.2	5.6	2.0	5.4	2.0			
Personal (10)	21.6	6.2	21.0	5.9	21.0	6.2			
Student Acquaintances (10)	24.4	6.5	24.0	6.6	24.0	6.6			
Topic of Conversation (12)	21.9	5.9	21.9	5.8	21.9	5.9			
Information in Conversation (6)	14.1	3.5	13.9	3.4	14.1	3.5			
Group Facilities and Organizations									
Student Union (10)	18.5	5.4	18.0	5.4	17.9	5.4			
Athletic and Recreational Facilities (10)	16.7	6.7	15.5	5.9	15.8	6.2	*	*	
Clubs and Organizations (10)	16.8	6.2	15.7	5.7	15.6	5.8	*	*	
Campus Residence (10)	21.1	8.2	21.5	7.0	20.6	7.2			

Figure 1

Attend UHM Again
1990, 1993 and 1996

"If you could start over again, would you go to the same college you are now attending?"

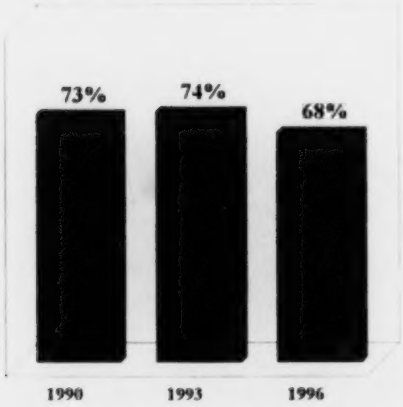


Probably Yes/Yes,Definitely

Figure 2

Liking UHM
1990, 1993 and 1996

"How well do you like college?"



I Like It/I Am Enthusiastic

Table 4
College Environment
Mean Comparisons of 1990, 1993 and 1996 Undergraduates

College Environment	1990		1993		1996		Significance @ .05 level		
	Mean	SD	Mean	SD	Mean	SD	90-96	90-93	93-96
ACADEMIC									
Emphasis on the development of academic, scholarly, and intellectual qualities	4.8	1.3	4.8	1.3	4.6	1.4			*
AESTHETIC									
Emphasis on the development of aesthetic, expressive, and creative qualities	4.3	1.4	4.4	1.3	4.2	1.4			
ANALYTICAL									
Emphasis on being critical, evaluative, and analytical	4.7	1.3	4.8	1.3	4.7	1.3			
VOCATIONAL									
Emphasis on the development of vocational and occupational competence	4.5	1.5	4.4	1.4	4.2	1.5	*		*
RELEVANCE OF COURSES									
Emphasis on the personal relevance and practical values of your courses	4.4	1.5	4.5	1.4	4.3	1.4			

Rating: 1 = Weak Emphasis to 7 = Strong Emphasis

Table 5
College Relationships
Mean Comparisons of 1990, 1993 and 1996 Undergraduates

College Environment	1990		1993		1996	
	Mean	SD	Mean	SD	Mean	SD
STUDENTS						
Relationship with other students, student groups, and activities	5.2	1.5	5.1	1.4	5.1	1.5
1 = Competitive, uninvolved, sense of alienation						
7 = Friendly, supportive, sense of belonging						
FACULTY						
Relationships with faculty members	4.8	1.5	4.8	1.4	4.8	1.4
1 = Remote, discouraging, unsympathetic						
7 = Approachable, helpful, encouraging						
ADMINISTRATION						
Relationships with administrative personnel and offices	3.8	1.7	3.9	1.6	3.9	1.6
1 = Rigid, impersonal, bound by regulation						
7 = Helpful, considerate, flexible						

Table 6
Estimate of Gain
Mean Comparisons of 1990, 1993 and 1996 Undergraduates

Estimate of Gain	1990		1993		1996		Significance @ .05 level		
	Mean	SD	Mean	SD	Mean	SD	90-96	90-93	93-96
Understanding yourself	2.9	0.9	2.9	0.8	2.8	0.9			
Understanding other people	2.9	0.8	2.9	0.8	2.8	0.9			
Ability to learn on own	2.9	0.8	2.9	0.8	2.8	0.8			
Broad general education	2.7	0.8	2.8	0.8	2.7	0.8			
Own values & ethical standards	2.7	0.9	2.7	0.9	2.7	0.9			
Put ideas together	2.7	0.8	2.7	0.8	2.7	0.8			
Familiarity with use of computers	2.4	1.0	2.5	1.0	2.6	1.0	*	*	
Different philosophies & cultures	2.6	0.9	2.7	0.9	2.6	0.9			
Career information	2.8	0.8	2.7	0.8	2.6	0.8	*	*	
Function as a team member	2.7	0.9	2.6	0.9	2.6	0.9			
Think analytically & logically	2.6	0.8	2.6	0.8	2.6	0.9			
Writing clearly & effectively	2.6	0.8	2.6	0.8	2.5	0.8			
Importance of history	2.5	0.9	2.6	0.9	2.5	0.9			
Knowledge of the world & its people	2.4	0.9	2.5	0.9	2.4	0.9			
Specialization for further education	2.6	0.9	2.5	0.9	2.4	0.9	*		
Vocational training	2.6	0.9	2.4	0.9	2.3	0.9	*	*	
Quantitative thinking	2.3	0.9	2.3	0.9	2.3	0.9			
Good health habits & phy fitness	2.2	0.9	2.1	0.9	2.1	1.0			
Nature of science & experimentation	2.1	0.9	2.2	0.9	2.1	0.9			
New applic in science & technology	2.1	0.9	2.1	0.9	2.1	0.9			
New scientific & technical develop	2.1	0.9	2.0	0.9	2.0	0.9			
Art, music, and drama	2.0	0.9	2.0	1.0	2.0	1.0			
Literature	2.0	0.9	2.1	0.9	2.0	0.9			

Rating: 1=Very Little 2= Some 3=Quite a Bit 4=Very Much

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Table 7
Estimate of Gain
Rank Order Comparison of Percent Responding
"Quite a Bit" and "Very Much" of 1996 Undergraduates

Estimate of Gain	Percent Responding "Quite a Bit" or "Very Much"		
	1990	1993	1996
Understanding other people	73	69	66
Ability to learn on own	68	67	65
Understanding yourself	68	71	64
Broad general education	60	64	61
Put ideas together	60	60	58
Own values & ethical standards	60	60	57
Career information	65	61	56
Different philosophies & cultures	52	57	56
Function as a team member	60	55	55
Familiarity with the use of computers	46	50	52
Think analytically & logically	53	53	52
Writing clearly & effectively	53	56	51
Importance of history	49	51	46
Specialization for further education	53	50	46
Knowledge of the world & its people	44	48	44
Vocational training	51	42	39
Quantitative thinking	39	40	38
Good health habits & phy fitness	35	31	31
Nature of science & experimentation	32	34	31
New applic in science & technology	32	28	29
Art, music, and drama	29	27	27
New scientific & technical develop	29	27	26
Literature	27	29	25

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